

AMENDMENTS TO THE SPECIFICATION:

Page 1, after the title, insert as new paragraph:

--CROSS-REFERENCE TO RELATED APPLICATION

This application is a National Stage entry of International Application No. PCT/GB03/00802, filed February 25, 2003, the entire specification claims and drawings of which are incorporated herewith by reference. –

On page 2, at line 20, insert the following paragraphs:

~~--According to a first aspect of the present invention there is provided a method of coating a product, carried on a surface of a delivery mechanism, with a coating substance, the method comprising:~~

~~delivering the coating substance to a location above said surface carrying said product;~~

~~allowing the coating substance to fall under gravity in the direction of said surface;~~

~~during its fall, subjecting the coating substance to at least one pressurised gas stream, whereby the falling coating substance is dispersed, and to an electric field, whereby the coating substance is charged~~

According to a first aspect of the present invention there is provided a method of coating a product, carried on a surface of a delivery mechanism, with a coating substance, the method comprising:

delivering the coating substance to a location above said surface carrying said product via an inclined chute down which the coating substance falls under gravity;

allowing the coating substance to fall under gravity in the direction of said surface from the end of the inclined chute;

during its fall under gravity, and substantially immediately beneath the exit end of said inclined chute, subjecting the coating substance to at least one pressurized gas

stream, whereby the falling coating substance is dispersed, and to an electric field, whereby the coating substance is charged.

In accordance with a further aspect of the present invention, there is provided an apparatus for coating a product, carried on a surface of a delivery mechanism, with a coating substance, the apparatus comprising:

an inclined chute for conveying the coating substance to a location above said surface carrying said product, an exit end of the chute being suitable for siting above said surface;

a gas jet nozzle for location substantially immediately beneath the exit end of the chute;

an electrode attached to or located adjacent to said nozzle;

a source of pressurised gas and means for coupling said source to said gas jet nozzle; and

means for charging said electrode;

wherein in use gas ejected from said nozzle passes over said electrode and is charged, and impinges on the coating substance falling from the exit end of the chute.

In accordance with a still further aspect of the present invention, there is provided apparatus for use in coating a product with a coating substance, the apparatus comprising:

a gas or liquid jet nozzle having means for coupling the nozzle to a supply of pressurized gas or liquid;

a nozzle holder to which the jet nozzle can be removably attached;

a needle electrode attached to the nozzle holder and means for coupling the electrode to a high voltage charging means; and

the needle electrode being located such that in use when gas or liquid is ejected from the nozzle the gas or liquid passes through an electric field created by the electrode.

On page 3, the paragraph starting at line 10 as follows:

~~Preferably, the coating substance is delivered to a location above said surface carrying said product via an inclined chute. More preferably, the chute is vibrated or shaken both to disperse the coating substance and to aid transfer of the substance along the chute. Preferably, an exit end of the chute has a width of 75 mm or less~~
Preferably, the chute is vibrated or shaken both to disperse the coating substance and to aid transfer of the substance along the chute. Preferably, an exit end of the chute has a width of 75mm or less.—

On page 3, at line 21 and continuing on page 4, insert the following paragraphs:

~~According to a second aspect of the present invention there is provided apparatus for coating a product, carried on a surface of a delivery mechanism, with a coating substance, the apparatus comprising:~~

~~a conveyor for conveying the coating substance to a location above said surface carrying said product; an exit end of the conveyor being suitable for siting above said surface;~~

~~a gas jet nozzle for location substantially beneath the exit end of the conveyor;~~

~~an electrode attached to or located adjacent to said nozzle;~~

~~a source of pressurized gas and means for coupling said source to said gas jet nozzle; and~~

~~means for charging said electrode;~~

~~wherein in use gas ejected from said nozzle passes over said electrode and is charged, before impinging on the coating substance falling from the exit end of the conveyor~~Preferably, said gas jet nozzle is attached to an underside of the conveyor, so that said nozzle is located directly beneath the exit end of the conveyor. More preferably, any of said gas jet nozzle, said electrode, said source of pressurised gas and said charging means are substantially decoupled from the remainder of said apparatus. An advantage of decoupling these components is that the electrical connections therein are then not subject to the vibrations that they might otherwise be subject to when coupled to the chute.

A needle electrode will generate a charging field which is more efficient at charging a gas or liquid ejected from the nozzle, than alternative electrode designs such as a wire electrode. Preferably, the needle electrode is relatively short, e.g. 1mm or less.

It will be appreciated that the design of the apparatus makes it easy to change the jet nozzle, e.g. from a nozzle designed to spray gas to a nozzle designed to spray liquid.--